Quality Control

Work Order ID 9 January-02-13 11:45:54 A			*9499	3*			 			Page 1
Item ID: D3216-1 Revision ID:		A	Accept	N900	040	100)* s	etup Star Stop	I VI	S1*
Item Name: Fitting Start Date: 1/02/13 Required Date: 1/10/13 Reference:	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item II Customer:	D:				· · · · · · · · · · · · · · · · · · ·	S2*
Approvals: Process	Plan: Mして	Date: 13-01-03	Tooling:	Da	ite:	-	R	tun Star	17	R1*
	,	· ·		Da	ite:			Sto	*N	R2*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr I	Revision Nbr									
D3216	Rev A									
100	FLOW WATER JET		0.00				50	<u> </u>		Jm 1-7-
Waterjet FLOW CNC Waterjet 304/125	Memo 1-Cut as per Deburr if nec		0.00 A Prog Rev:	2-						
110	QC2- Inspect parts off ma	achine FAI/FAIB	0.00							
110 QC Quality Control	Memo		0.00				_ 50	0		Jm 1-7-1
120	QC8- Inspect parts - seco	nd check	0.00 5				<i>_</i> ,_			
120	Memo		0.001318		-		_ <u>SO</u>			

NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE					
			i								QA C	losed:	D	ate:	
Work Ord	er: ˌ					DISPOSITION	-			AGAINST I	DEPART	MENT			
Part NCR						Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	R		Water Je d. Eng. Coor re/Packaging Supplie		Engineering Quality Other
Root		Date	Ston	Qty		ption of work order update or Non-conformance		Initial nief Eng		tion ription	1 -	n & ate	Verification	20	QC Inspector
Cause Doc/Data	1	Date	Step	Qty		of Non-comormance		ner Eng	Desci	приоп	+ -	ate	vernicati	JH	QC IIIspector
Equip/Tooling	\vdash														
Operator															
Material	\vdash														
Setup															
Other	Н		1												
Process															
Supplier															
Training	П				•			:	-						
Unapproved		•	İ							•					
			1	1 1		F	AUI	LT CATE	GORY		1				
Land	ing G	Gear				General		_	· ·	_					
		Bending				Bend		Grain			Ovali	zed			Pressure/Forced
		Centre N	ot Concei	ntric to C	o/s	BOM/Route		Hardwa	re		Over	/Under	tolerance		Temperature/Cure
		Cracks			,	Broken/Damaged		Inspecti	on Incomplete		Part	Incorre	ct		Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/	Unclear	Part	Lost/M	issing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part	Moved			
		Heat Trea	at			Countersink		Mislabe	led		Posit	ioned V	Vrong		
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	ł		Pow	er Loss/	'Surge		Other
		Ripples ir	n Bend			Drill Holes		Offset		_					
1		Torque V	Vaves in F	ytrusion	. [Drawing		Out of C	alibration						

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde January-02-13					*949	93*						Page 2
Item ID: Revision ID: Item Name:	D3216-1			A	Accept	*N900	040	100)*	Setup Star Stop	1.71	S1* S2*
Start Date: Required Date: Reference:	1/02/13 1/10/13	Start Qty: 40.00 Req'd Qty: 40.00		*40* *40*		Cust Item II Customer:	D:			D		
Approvals:		s Plan:	_	, .	-		ite:			Run Star Stoj	I <i>N</i>	R1* R2*
Sequence ID/ Work Center II 130 *120* Small Fab Small Fab	D	Operation Description Small Fab Memo Tumble until	parts have	a polished finish	Set Up/ Run Hours 0.00 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Qty	Reject Number	Insp. Stamp
140 *140* QC Quality Control		QC5- Inspect part comple Memo	eteness to st	tep on W/O	0.00 DAS 0.00 13-1, T)		:	S			

150

Identify as per dwg & Stock Location: \$\)\$ 0.00

150 Packaging

ackaging Memo 0.0

Packaging

0.00

CH 13/0/11 (50

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C		NFORM	//ANCE / UPI	DATE			
											QA Closed:	Date:	
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part I	No.					Rework Skid-tube Crosstube Scrap Machining Small Fab Thermoforming Finishing Work Order Update Large Fab Composite			1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other		
Root			[Descri	ption of work order update		nitial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance		ief Eng		iption	Date	Verification	QC Inspector
Doc/Data	Г												
Equip/Tooling]											
Operator													
Material													
Setup													
Other													ļ
Process													
Supplier													
Training													
Unapproved								<u>^</u>					
						F	AUL	T CATE	GORY		•		
Landi	ng (Gear				General		•					
1		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/l	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
]		Cuffs				Contamination		Mainte	nance		Part Moved		-
		Heat Trea	it			Countersink		Mislabe	led		Positioned V	Vrong	
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	I		Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 94993 Page 3 January-02-13 11:45:54 AM Item ID: D3216-1 Accept *N900040100* Setup Start **Revision ID:** Item Name: Fitting *40* **Start Date:** 1/02/13 **Start Oty: 40.00 Cust Item ID:** Required Date: 1/10/13 Reg'd Oty: 40.00 **Customer:** Reference: Run Process Plan: Date: Tooling: Date: Approvals: Stop SPC (Y/N): QC: Date: Date: Tool ID Sequence ID/ Operation Set Up/ Tool # Plan Accept Reject Reject Insp. Work Center ID Code Qty Qty Number Stamp Description **Run Hours** 160 OC21- Final Inspection - Work Order Release 0.00 *160* QC 0.00 Memo Quality Control

NCR: Yes / No WORK						WORK ORDER NON-	CO	NFORM	MANCE / UPDA	ATE	•		
											QA Closed:	Date	
Work Ord	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part NCR	No.					Rework Scrap Use-as-is Work Order Update		Therm	Machining noforming	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Action	n	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Cl	nief Eng	Descript	tion	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved							FAU	LT CATE	GORY				
Landi	ing G	iear				General							_
		Bending Centre No Cracks Crushed/			/s	Bend BOM/Route Broken/Damaged Burrs			re on Incomplete ions Incomplete/Unc	clear	Ovalized Over/Under Part Incorre Part Lost/M	ct	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	\vdash	Cuffs	cimpeu.		-	Contamination	-	Mainte		Lical	Part Moved	1331118	
	-	Heat Trea	at			Countersink	-	Mislabe		<u> </u>	Positioned V	Vrong	
	-	Inspectio		Tube	<u> </u>	Cut Too Short	-	Misread		<u> </u>	Power Loss/		Other
	\vdash	Ripples in		. 300		Drill Holes		Offset	-	<u>L</u>	7. 246. 5033/		100.00
	\square	Torque W		extrusion		Drawing		-1	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

January-02-13 11:45:54 AM

Work Order ID:

94993

Parent Item:

D3216-1

Parent Item Name:

Fitting

Start Date: 1/02/13

Required Date: 1/10/13

Page 1

Start Qty: 40.00

Required Qty: 40.00

Comments:

IPP: A03.10.28New IssueKJ/RF

IPP Rev:B Now on Waterjet 06-07-03 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA 304/316 0.125 Sheet		Purchased	No			100	sf	104.5000	0.0288	121263	2.0		Jm 1-7-13

											DQ	\ :D	ate:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	MANCE / UP	DATE				
		•							•		QA Close	d: D	ate:	
Work Ord	er.			,		DISPOSITION				AGAINST DE	PARTMEN	IT/PROCESS		
Part I	No.					Rework Scrap Use-as-is Work Order Update	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Composite			P	Water Je rod. Eng. Coo ore/Packagin Supplie	r. g	Engineering Quality Other	
Root					Descri	ption of work order update		Initial	Ac	tion	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verificati	on	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
							AUL	LT CATE	GORY		<u> </u>			
Landi		Gear Bending Centre No Cracks Crushed/ Cuffs Heat Trea	Crimped.		o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink		4 '	on Incomplete ions Incomplete/ nance	/Unclear	Ovalized Over/Und Part Incor Part Lost/ Part Move	Missing ed		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
		Inspectio	n Strip in	Tube		Cut Too Short		Misread			Power Los	=	Г	Other
	\vdash	Ripples in				Drill Holes		Offset		<u></u>	_	-	_	

Out of Calibration

Outside Dimensions

Out of Sequence

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

DART AEROSPACE LTD	Work Order:	94993
Description: Fitting	Part Number:	D3216-1
Inspection Dwg: D3216 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Х	First Article		Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.600	+/-0.010	2.607"	_		V	Ikmo,
2.010	+/-0.010	2.013	_		V	
0.295	+/-0.010	0.970,299	_		V	
1.548	+/-0.010	690.299°	_		V	
1.004	+/-0.010	1.007"			V	
0.295	+/-0.010	G.217"			V	
0.250	+/-0.010	0.253	_		V	
0.125	+/-0.010	0.126	•		V	
	·			-		
				-		

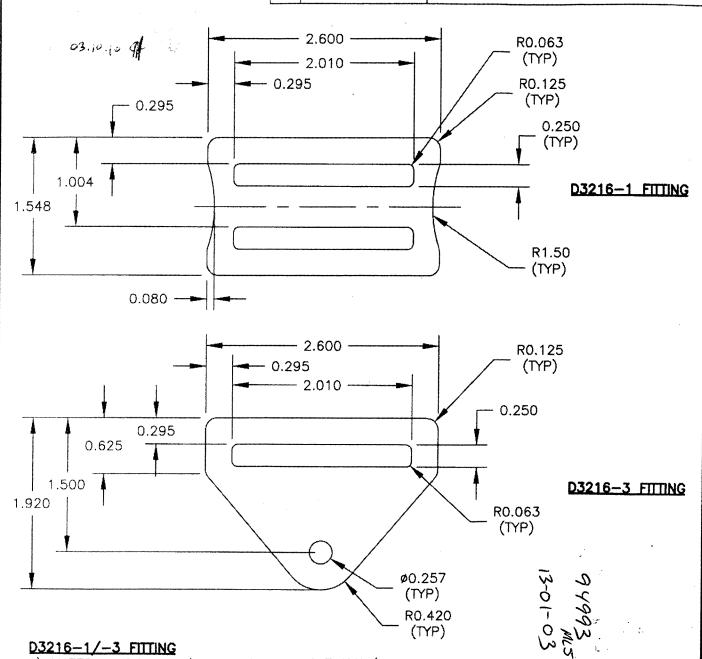
Measured by:	Im	Audited by:	Prototype Approval:	N/A
Date:	1-7-13	Date: 13.7.8	Date:	N/A

Rev	Date	Change	Revised by	Approved
_ A	07.11.23	New Issue	KJ/EC/DD	N.
			:11	





DESIGN DRAWN BY		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHEC	KED AN	APPROVED	DRAWING NO.	REV. A
	#	-	D3216	SHEET 1 OF 1
DATE			TITLE	SCALE
03.0	03.09.26		FITTING	1:1
Α		03.09.26	NEW ISSUE	



- 1) MATERIAL: AISI 304/316 PLATE, 0.125 THICK (REF DART SPEC. M304S11GA)
- 2) FINISH: MOLECRO POLISH
- 3) ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

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